

As far as I know this is the second specimen of Mockingbird collected in South Dakota. Hayden collected one in the Black Hills in 1860.

Dumetella carolinensis. Catbird.—Rare. A brood seen in the eastern part of the county near Oelrichs.

Torostoma rufum. Brown Thrasher.—Quite abundant in the wooded valleys. Nests.

Salpinctes o. obsoletus. Rock Wren.—Nests plentifully about rocks.

Sitta carolinensis aculeata. Slender-billed Nuthatch.—Common in the pine-clad portions of the county.

Penthestes atricapillus septentionalis. Long-tailed Chickadee.—An abundant resident.

Planesticus m. migratorius. Robin.—Rare, in Hot Springs.

Sialia currucoides. Mountain Bluebird.—An abundant breeder. University of South Dakota, Vermilion, S. D.

A STUDY OF THE AVIFAUNA OF THE LAKE ERIE ISLANDS.

(With Particular Reference to the Migration Phenomena.)

BY LYNDS JONES.

The above title is chosen because the author has only just completed in the pages of the Bulletin a study of the Birds of Cedar Point and vicinity, and there has also recently appeared in these pages a study of the Birds of Point Pelee by Taverner and Swales. It will be impossible to confine this study to islands, but references to the adjacent mainland on both sides of Lake Erie must be expected. Therefore, the following summary of work done will be found to include all visitations to Cedar Point on the Ohio shore, and Point Pelee on the Canada shore. This enumeration will indicate the fragmentary nature of the work. The paper must, therefore, be regarded as a report of progress made in the hope that it will stimulate someone who is favorably situated to carry the work to a successful issue.

ISLAND VISITATIONS.

May 28, 1894.—Kelley's and Green. One-day Geology excursion.

May 27, 1901.—Kelley's and Put-in-Bay. One-day Geology excursion.

August 5 to 9, 1901.—Middle Bass, Sugar, North Bass, Hen, Big Chicken, Little Chicken, Chick, North Harbor, East Sister. Two men and a boy.

August 24 to 27, 1904.—Middle Bass, Sugar, Big Chicken, North Harbor, East Sister. Three men.

August 26 to September 2, 1905.—Middle Bass, Sugar, Big Chicken, Little Chicken, North Harbor, East Sister, Pelee. Two men.

July 28, 1908.—Pelee, Big Chicken, North Harbor. One-day class excursion.

August 17 to 21, 1908.—Kelley's, Put-in-Bay, Middle, Pelee, Big Chicken, Little Chicken, North Harbor, East Sister, Rattle. Four men.

July 16 to September 7, 1910.—Pelee, with side trips to Big Chicken, Little Chicken, North Harbor, Middle, Kelley's. Class of eleven students.

August 21 to 22, 1911.—Pelee. Three men; part of a summer's work.

August 22 to 23.—Kelley's. Five men; part of a summer's work.

The summer's work of which the last two records form a part, was the July 28 to August 21, 1911, Point Pelee class studies.

It seems worth while to give in this connection a complete list of the Cedar Point visitations for the purpose of indicating supplementary work there.

CEDAR POINT VISITATIONS.

1901.

August 5, August 9.—Each a part of one day.

1902.

July 11-12.—A canoe trip to locate breeding birds in the marshes.

1903.

April 21.—A canoe trip into the marshes for duck. June 26, sand spit.

1904.

June 17.—Sand spit.

1905.

July 6-7.—Canoe trip into the marshes for breeding birds.

1906.

October 15, 22, 27, 29; November 5, 12, 19, 26; December 17.—For migrations.

1907.

January 7, February 18, March 18, 25, 30; April 8, 15, 29; May 5-6, 12-13, 17, 19-20; July 1 to August 3, for summer work. September 13, 23, 30; October 7, 21; November 4, 18; December 27—**Studies of the Migrations.** g

1908.

January 6, 20; March 2, 9, 16, 23, 27, 30; April 2, 3, 20, 27; May 4, 11, 15-18; June 1, 22 to July 31, for summer work. August 1; November 16.—For studies of the migrations.

1909.

February 8, March 15, April 26, May 13-14, 16-17, 22; July 26, September 18, October 18.

1910.

February 5, May 20; September 7-10.—The last class work.

1911.

May 8, August 23 to 31.—Class work. October 16.

ISLAND VISITATIONS.

Kelley's, May 28, 1894.—This was a one-day trip with a class in Glacial Geology, and only two hours were spent on this island in the middle of the day. A landing was also made on Green Island, but no birds but Robins were seen there. No birds worthy of space were seen on Kelley's.

Kelley's, May 27, 1901.—This was another Geology trip. While it was of longer duration, it was not notable from an ornithological standpoint. On this trip a landing was made on Put-in-bay, but there was neither time nor opportunity to study the birds.

August 5 and 6, 1901, were spent on Middle and North Bass, August 7 and 8 were spent rowing from North Bass to Big Chicken, Chick, and Little Chicken, Hen, North Harbor, and East Sister, and back again to North Bass. The night of the 7th was spent on North Harbor, and another landing made on Big Chicken on the way home on the 8th. A part of the 9th was spent on Sugar and on Middle Bass, and a close and careful study of the birds of the lagoon on Middle Bass made on that day. The writer was accompanied on this trip by Rev. W. L. Dawson, and the author's eight-year-old son. Since the birds seen on this trip have never been pub-

lished in an ornithological magazine it seems worth while to give the list here, with brief annotations.

Middle Bass Island, August 5, 6, and 9, 1901.—The late afternoon of the 5th and early morning of the 6th, and the latter half of the forenoon of the 9th were spent on this island. Of course the night of the 5th was spent on this island. All of the birds enumerated were common unless otherwise stated.

Common Tern, Bittern, 1; Great Blue Heron, 6; Green Heron, King Rail, 9; Pectoral Sandpiper, Least Sandpiper, Semipalmated Sandpiper, Yellow-legs, Solitary Sandpiper, Spotted Sandpiper, Killdeer, Semipalmated Plover, Mourning Dove, Bald Eagle, 2; Yellow-billed Cuckoo, Belted Kingfisher, Northern Flicker, Chimney Swift, Ruby-throated Hummingbird, Kingbird, Wood Pewee, Blue Jay, Redwinged Blackbird, Orchard Oriole, Baltimore Oriole, Bronzed Grackle, Goldfinch, Chipping Sparrow, Field Sparrow, Song Sparrow, Towhee, Indigo Bunting, Purple Martin, Barn Swallow, Tree Swallow, Bank Swallow, Cedar Waxwing, Red-eyed Vireo, Warbling Vireo, Yellow Warbler, Redstart, Catbird, Brown Thrasher, Robin.

The only birds worthy of particular note in this list are the sandpipers. These were found feeding at the lagoon, the water of which was so low that extensive mud flats around the whole circumference furnished ideal feeding conditions. We were able to creep up to the edge of the vegetation and obtain views of the birds at a range of a few feet as they fed.

North Bass Island, August 6, 7, and 8, 1901.—We landed on this island about ten o'clock in the morning of the 6th, spent the night there and left it shortly after sunrise. We reached it again at twilight on the 8th, and left about 7 o'clock on the morning of the 9th. Thus most of one day, two mornings and two nights, were spent here. The birds seen were Common Tern, Spotted Sandpiper, two Bald Eagles at their nest spooning, Yellow-billed Cuckoo, Belted Kingfisher, Downy Woodpecker, Red-headed Woodpecker, Northern Flicker, Chimney Swift, Kingbird, Phoebe, Wood Pewee,

Blue Jay, Cowbird, Orchard Oriole, Baltimore Oriole, Bronzed Grackle, Field Sparrow, Song Sparrow, Indigo Bunting, Purple Martin, Tree Swallow, Bank Swallow, Cedar Waxwing, Red-eyed Vireo, Warbling Vireo, Yellow Warbler, Redstart, Catbird, Brown Thrasher, Carolina Wren, Robin. The only bird of special interest found here was the Carolina Wren. One would suppose that an island of such diversified topography would have furnished a much larger list of birds. There were few birds in the open fields, and even the woods were disappointing.

Big Chicken Island, August 7 and 8, 1901.—We landed before 7 o'clock in the morning, and spent about three hours counting the nests, which were still occupied by either eggs or young birds, and unoccupied nests, in the effort to make a fair estimate of the birds which were flying all about and above us. The count resulted in placing the number at about 3000. Among these there were many Black Terns, mostly in the transition plumage. Of course the nesting birds were without exception Common Terns. The only birds seen here were the Common and Black Terns, Spotted Sandpipers, and a roving flock of Bronzed Grackles. There was pretty good evidence that the Sandpipers were nesting. Big Chicken is a mound of rounded limestone rocks lying upon a limestone ledge, surrounded with scattering granite boulders, also rounded. There is a small frame shack or shanty, two trees about ten inches in diameter, and a clump of white willows, all occupying the middle of the island. The top is also thickly grown with wild gourd vines and some Polygonum weeds. The terns nest everywhere above high water mark.

Chick Island, August 7, 1901.—At normal water level this island is scarcely more than a reef, with no vegetation except the algæ, which cling to the rocks. On the occasion of our visit there was a dense mass of Polygonum growing to the height of three feet occupying the center of the exposed rock some twenty feet wide by two hundred long. Here the Common Terns were nesting among these weeds and on the abundant drift wood which flanked the weeds on the south-

westerly exposure. About twenty Herring Gulls were perched on granite boulders which projected above the water, or stood at the edge of the water along the margin of the island. Two Black Ducks made off from the island as we approached it. Spotted Sandpipers were the only other birds noted here. This rock is known on the Government charts as Big Chicken Reef or Shoal. But at the time of our visit it clearly deserved a name which would be distinctive. Since it was the smallest of the brood it might appropriately be considered "The Chick."

Little Chicken Island, August 7, 1901.—Chick lies about half a mile north of Big Chicken, and Little Chicken about a mile east of Chick. In general contour it closely resembles Chick, but lies much higher out of the water, so that a group of white willows has managed to grow to a height of twenty feet, clinging to the north edge. The center of this long rock is thickly strewn with drift, the drift completely surrounded with a rank growth of *Polygonum*. We spent about two hours on this bit of an island, and the count of nests made the estimate of 1500 birds seem conservative. Here, as at the other two islands, Black Terns mingled freely with the Common. There were no Herring Gulls here, but two Black Ducks flew away as we approached, probably the same two which left Chick upon our approach, since they flew back there. Spotted Sandpipers were the only other birds seen here.

Hen Island, August 7, 1901.—We ate our dinner on this island, spending about three hours on it. Unlike the Chicken Islands, the "Old Hen" stands up out of the water with perpendicular faces everywhere but at the small landing place, at the south-east corner. It has been occupied by a club house for many years, yet it is covered with trees, mostly hackberry. Only the center is cleared, and here peach trees have been set out, and there is an attempt at a small garden patch. We understood that it is occupied every summer, which means that the Common Terns have had to vacate. It is said that they nested on this island in great numbers before the club

house was built. Common Terns were flying about, Spotted Sandpipers teetered on the rocks just off shore, and in the trees we found Northern Flickers, Kingbirds, Wood Pewees, Red-winged Blackbirds, Bronzed Grackles, Goldfinches, Song Sparrows, Purple Martins, Red-eyed Vireos, and House Wrens, while Bank Swallows were flying about in considerable numbers. The only notable bird here was a three-legged chicken, which we were obliged to admire.

North Harbor Island, August 7 and 8, 1901.—We reached this island just at nightfall, and went into camp. It is like the Old Hen in standing up out of the water, but is about half as high, with a gravelly beach at its south end. Great glacial grooves mark where the ice scoured it down in crossing it at nearly right angles. It is about five rods wide by 125 long, extending in a northerly and southerly direction. Nearly its whole surface is covered with trees and bushes, and the usual grasses and other annuals cover the ground under trees and bushes. The ground is also covered with snails (*Helix albolabris* ?), and the dead shells occur in great numbers in the humus. We saw Purple Martins coming toward the island in considerable numbers, and they finally settled for the night in the large tree which marks the south end of the island. There were enough of them to fill the tree. As we prepared for the night we were surprised to see the Common Terns settling among the trees, alighting on the branches, where they apparently remained roosting all night. Their nests were everywhere about the island, except in the densest undergrowth. A count of the nests was impossible, but there seemed to be fully as many birds about as at Big Chicken. The birds noted were Common Tern, Black Tern, Great Blue Heron, Spotted Sandpiper, Kingbird, Wood Pewee, Red-winged Blackbird, Bronzed Grackle, Goldfinch, Purple Martin, Bank Swallow, Cedar Waxwing, Red-eyed Vireo, Carolina Wren singing. The Wren was a great surprise. We left the island to visit East Sister, in the middle of the day, and returned to pick up the camp equipment. We finally left the island about 3 o'clock p. m.

East Sister Island, August 8, 1901.—As indicated above, the middle of the day was spent on this rather large island. It is evidently made of lake drift which has been pushed up on a limestone reef of considerable extent. A low interior is bordered all along the southwestern half by a ridge of limestone rocks, which have been worn round by the waves. The northeastern end is a level tract, with a house and out buildings, and an orchard of some two acres. Otherwise the island is overgrown with trees and bushes, the lower parts being filled with marshy growths. The birds noted were: Common Tern, Great Blue Heron, Spotted Sandpiper, Marsh Hawk, Kingbird, Wood Pewee, Crow, Red-winged Blackbird, Bronzed Grackle, Song Sparrow, Cardinal, Indigo Bunting, Purple Martin, Barn Swallow, Bank Swallow, Cedar Waxwing, Red-eyed Vireo, Redstart, Carolina Wren, and Robin. The Cardinal and Carolina Wren were unexpected, even after the occurrence of the latter on North Harbor. The occurrence of these birds so far north indicates their tendency to extend their range wherever conditions are at all favorable.

Sugar Island, August 9, 1901.—A short stop was made at the western end of this island on the return from North Bass to Middle Bass. This small island is somewhat like East Sister, but is rather higher, and more rock bound. It was formerly used as a summer resort by one family, and was mostly planted for a vineyard. The house and barn still stand, and the neglected grape vines still mark the place of their setting. Several pear trees have also been set out. The west third of this island is grown to natural woods, and a fringe of trees border it. Some of the trees are more than a foot in diameter.

The birds seen follow: Common Tern, Spotted Sandpiper, Killdeer, Yellow-billed Cuckoo, Belted Kingfisher, Red-headed Woodpecker, Kingbird, Wood Pewee, Blue Jay, Crow, Red-winged Blackbird, Baltimore Oriole, Bronzed Grackle, Goldfinch, Song Sparrow, Bank Swallow, Red-eyed Vireo, Brown Thrasher, Robin.

August 24 to 27, 1901.—This was a sailing cruising trip

among the islands, during which visits were made to Middle Bass, Sugar, Big Chicken, North Harbor, East Sister, in company with two friends who were not ornithologists. Conditions had not changed on any of the islands visited. The Carolina Wren was again found on North Harbor and the Cardinal on East Sister, indicating that they had established permanent quarters there. At the lagoon on Middle Bass, in which the water reached well up on the bordering bushes, and therefore no mud flats occurred, the Pied-billed Grebe, Coot, Sora, Florida Gallinule, Least Bittern, and Louisiana Water-Thrush were added to the 1901 list. Nothing else worthy of mention was learned on this trip.

August 26 to September 2, 1905.—This was another sailing cruise, but was undertaken with the birds definitely in mind. The author was accompanied by Maynard Taylor. The start was made from Vermilion at 5:00 p. m., August 26, and we ran in to Cedar Point about 9:00 p. m., where we slept on the beach. After an early morning study of the birds we left at 8:00 a. m., reaching Sugar and Middle Bass at 3:00 p. m. A visit was paid to Big Chicken, North Harbor, and East Sister on the 28th, Pelee Island from 10:00 a. m. on the 29th to 1:30 p. m. on September 1st.

Middle Island from 2:30 to 2:50 p. m., September 1st.—The late afternoon of the 1st and the morning of the 2nd were spent on Kelley's Island. A thunder squall in the early morning drove us back from the east end of the island, where we had made a start for home, and made necessary a return trip around the west end and south side of the island, where we noted a few small birds crossing the channel to Marblehead, as we sagged along before a mere breath of air from the south-west.

No previous list of the birds of Pelee Island seems to have been made public, hence it may be worth while to print here the birds recorded during this brief reconnoissance. Fishing Point was pretty well looked over and a brief visit was also made to the east side of the island about a mile north of Saw-Mill Point.

Herring Gull, Common and Black Tern, were in considerable numbers on the sand spit. There were five Black Ducks in the swamp. One Least Bittern and one Green Heron were also seen in the swamp. Florida Gallinules seemed to possess the swamp, there were so many of them. Along the east beach and on the sand spit there were numbers of Spotted and Semipalmated Sandpipers, Semipalmated and Piping Plovers, two Greater Yellow-legs on the 30th, and Killdeer. Mourning Doves were numerous and flying up and down the point in the morning. One Osprey and two Bald Eagles came out over the point on the 29th. Screech Owls quavered in the cedars at night. Several Belted Kingfishers divided their time between the swamp and lake. One Yellow-billed Cuckoo was seen near the swamp. Many Red-headed and Downy and one Red-bellied Woodpecker lived about the swamp, and Flickers were found feeding in the trees and fields north of the swamp. Ruby-throated Hummingbirds were swarming about the sensitive plants, Chimney Swifts were flying about and migrating southward, and a few Nighthawks were also noted in migration toward evening, on the 29th. Kingbirds were migrating each day, Phœbes were seen about the marsh, and Least Flycatchers were everywhere among the cedars. The Crows were numerous in the fields, and the Blue Jays remained among the trees near the swamp. Bobolinks and Red-winged Blackbirds were migrating in flocks, and only four Bronzed Grackles were seen at all, and they were flying north and toward the grain fields of the island. Goldfinch, Song Sparrow, Cardinal, and Indigo Bunting were all common, particularly so in the vicinity of the swamp, the Cardinals also ranging among the red cedars. Purple Martins, Barn, Cliff, Bank and Rough-winged Swallows were passing southward almost continuously during the early morning and late afternoon. There were many Cedar Waxwings among the red cedar trees, and some in the vicinity of the swamp. Red-eyed Vireos were numerous everywhere among the trees. Of the warblers the Blackburnian, Magnolia, Black-poll, and Canadian were common in

the cedars and deciduous woods, and the Tennessee, Black-throated Blue, Wilson's, Water-Thrush, and Northern Yellow-throat were found in large numbers in the bushes and trees surrounding the swamp, but nowhere else. The entire absence of Redstarts was surprising. A small colony of Carolina Wrens was found in a tangle of fallen trees and bushes, vines and false solomon seal, about twenty rods south of the swamp, near the east shore. Four were actually seen, but there appeared to be more than that. Catbirds were very numerous about the swamp, but strange to say, there were no Brown Thrashers anywhere. Two Chickadees were found at the swamp, and also a number of both White-breasted and Red-breasted Nuthatches there. Robins were everywhere, and a few of them seemed to be migrating. The woods were carefully hunted for thrushes, but none were found until the 31st, when the earliest dawn was filled with the calls of the Olive-backed. During the 31st, and 1st of September, these thrushes literally swarmed in all the woods, even down to the drift wood which lined the middle of the base of the sand spit. None were seen to cross to Middle Island. None were seen there on the afternoon of the 1st, nor any on Kelley's. It seems almost incredible that they should have become so massed on Pelee Island and none have made the short flight to the intervening islands and the Ohio shore.

The above short and incomplete list indicates the great diversity of bird life which visits this island during the year, and the importance of the island as a resting place for the southward migrating host. One might almost venture the assertion that an intensive study of the birds of this island throughout the year would result in a larger list of birds than could be made on any land area of equal extent. At any rate it offers almost compelling inducements to the ardent ornithologist. It possesses many elements of an ideal bird reserve.

The Middle Island list is interesting only by comparison. Common Tern, Herring Gull, Bronzed Grackle, Kingbird,

Wood Pewee, Least Flycatcher, Song Sparrow, Indigo Bunting, Wilson's, Black-throated Blue, Canadian, and Black-poll Warblers, Redstart, Goldfinch, and Robin, all fairly common. It should be noted that there were no Common Terns nesting on this island during this year.

The Kelley's Island list is not of sufficient interest to warrant the space it would occupy. It is sufficient to say that the only migrant birds noted were the Wilson's, Black-poll, and Magnolia Warblers. The Purple Martins were crossing in great numbers from Pelee Island, and could be noted all the way. When they reached Kelley's they remained there, and at early twilight formed a huge funnel shaped cloud over the woods a little west of the middle of the island. This cloud was the signal for retiring into the trees for the nightly roost.

July 28, 1908, a class of ten students visited Pelee, Big Chicken, North Harbor, and Put-in-Bay islands. Since another trip was made to these same islands and also to Little Chicken, Middle, and the Rattle of Rattlesnake islands by four of us from August 17 to 21 of the same summer, nothing need be said of the one-day trip separately. The participants in this launch trip were B. R. Showalter, W. G. Gifford, students, and the writer's fifteen-year-old son. The itinerary of this trip was as follows: Left Sandusky at 3:15 p. m., August 17, spent that night on the east side of Kelley's. Middle Island, 7 to 10 a. m., August 18; Pelee Island, 10 a. m., August 18, to 8 a. m., August 20. Brief stops were made on Little Chicken, Big Chicken (Chick being under water), North Harbor, where lunch was eaten and considerable study and photographing done, the Rattle of Rattlesnake, and Cedar Point, all on August 20, with a stop for the night and early morning at Cedar Point. The only notable things learned on this trip, aside from some new records for Pelee Island, were that there were no changes of any consequence in the conditions on the smaller islands, and we found the Common Terns nesting in as great numbers as possible on the westerly extending reef of Middle Island, and all over the top of the Rattle. We were also told that there were nest-

ings on Starve Island, off the south-eastern exposure of Put-in-Bay, but we were not able to visit it.

On Pelee Island we found the Brown Thrashers in force, one Sparrow and three Marsh Hawks fussing around the point, five Sanderlings and three Red-backed Sandpipers on the point, decidedly more Cardinals and Carolina Wrens than on any previous visit, and of the warblers, Yellow, Pine, Prairie, Chestnut-sided, Black and White, Redstart, Oven-bird, Louisiana Water-Thrush and Yellow-breasted Chat, which were not seen on the previous visit, besides the Northern Yellow-throat, Magnolia, and Canadian Warblers, which were recorded in 1905. Baltimore Orioles were also common, and one Downy and one Hairy Woodpecker were seen at the swamp. Two Field Sparrows, two Olive-sided Flycatchers, one Wilson's Thrush, a female Mallard, many Soras and many Yellow-bellied Flycatchers were also seen. Most of the other birds noted in 1905 were in the same numbers as then.

This concludes the fragmentary studies, and leads up to the detailed studies undertaken on Pelee Island in 1910 and on Point Pelee in 1911, to which they may be regarded as introductory.

MOMENT'S WITH THE LECONTE'S SPARROWS.

(*Passerherbulus lecontei*.)

BY ALTHEA R. SHERMAN, NATIONAL, IOWA.

This locality in northeastern Iowa cannot be far from the center of the migration route of Leconte's Sparrows. The wet meadow that stretches on either side of our back fence seems to offer an ideal stopping-place for this species, yet a faithful outlook maintained for years has failed to furnish a fleeting glimpse of one of these bright little birds. During the past autumn (1911) unfavorable conditions in the home meadow forced me to seek the sparrow migrants in a similar one situated a quarter of a mile away, and farther up the same ra-